

**Amendments to the Claims**

1. (Original) A method for detecting a DNA strand break, comprising the steps of :  
binding a PprA protein derived from Deinococcus radiodurans or a fragment thereof to a DNA  
strand break;

and

detecting the PprA protein or a fragment thereof bound to the DNA strand break.

2. (Original) The method for detecting a DNA strand break according to Claim 1, wherein the  
PprA protein derived from Deinococcus radiodurans or a fragment thereof is a protein having an  
amino acid sequence of SEQ ID NO: 1 or a fragment thereof.

3. (Canceled)

4. (Canceled)

5. (Original) A kit for detecting a DNA strand break, comprising an amount of PprA protein  
derived from Deinococcus radiodurans or a fragment thereof and a means for detecting the PprA  
protein or a fragment thereof.

6. (Original) The kit for detecting a DNA strand break according to Claim 5, wherein the PprA  
protein derived from Deinococcus radiodurans or a fragment thereof is a protein having an amino  
acid sequence of SEQ ID NO: 1 or a fragment thereof.

7. (Canceled)

8. (Canceled)

9. (New) The method for detecting a DNA strand break according to Claim 1, wherein the PprA protein or a fragment thereof bound to the DNA strand break is detected using an antibody or a fragment thereof which specifically bind to the PprA protein or a fragment thereof.

10. (New) The method for detecting a DNA strand break according to Claim 9, wherein the antibody is a polyclonal antibody or a monoclonal antibody.

11. (New) The method for detecting a DNA strand break according to Claim 2, wherein the PprA protein or a fragment thereof bound to the DNA strand break is detected using an antibody or a fragment thereof which specifically bind to the PprA protein or a fragment thereof.

12. (New) The method for detecting a DNA strand break according to Claim 10, wherein the antibody is a polyclonal antibody or a monoclonal antibody.

13. (New) The kit for detecting a DNA strand break according to Claim 5, wherein the means for detecting the PprA protein or a fragment thereof comprises an antibody or a fragment thereof which specifically binds to the PprA protein or a fragment thereof.

14. (New) The kit for detecting a DNA strand break according to Claim 13, wherein the antibody is a polyclonal or a monoclonal antibody.

15. (New) The kit for detecting a DNA strand break according to Claim 6, wherein the means for detecting the PprA protein or a fragment thereof comprises an antibody or a fragment thereof which specifically binds to the PprA protein or a fragment thereof.

16. (New) The kit for detecting a DNA strand break according to Claim 14, wherein the antibody is a polyclonal or a monoclonal antibody.